



**STRATEGY
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**GREAT BRITAIN IN WORLD WAR I,
THE BATTLES OF CAMBRAI AND AMIENS**

BY

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ABSTRACT

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Great Britain became involved in World War I as a result of a need to protect its interests at home and abroad. Early in 1914 there were threats to Great Britain's strength in Europe largely as a result of Germany's attempts to spread its influence militarily, politically, and economically. The Allied powers found themselves in a stalemate on the Western Front beginning in 1915. The battles of Cambrai, November 1917 and Amiens, August 1918 marked distinct points of a failure to exploit success and then success in Great Britain's attempts to break the stalemate on the Western Front. This paper addresses the changes in leadership, technology, maneuver, and mobility that contributed to British success on the Western Front in August 1918.

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GREAT BRITAIN IN WORLD WAR I, CAMBRAI AND AMIENS

British involvement in World War II came as a result of several factors. Prior to 1914, the British had enjoyed status as a supreme naval power without equal. The British had been able to extend their empire because of the power projection capability of its naval forces. Coupled with the fact that the geography of Great Britain was that of an "island nation" there was not much need for a large standing army other than what forces were necessary to provide perimeter security. The British placed great stock in their naval forces, which had a history of great successes and the British, certainly "enjoyed" their share of colonial possessions throughout the world. But that is not to say they desired to become directly involved in the goings-on of their immediate neighbors in Europe, especially in events that were not directly related to British interests.

So long as no treaty obligation or true British interest is involved I am of your opinion that we should remain neutral. Balkan quarrels are no vital concern of ours...But the march of events is sinister. The extension of the conflict by a German attack upon France or Belgium would raise other issues than those which now exist, and it would be wrong at this moment to pronounce finally one way or the other as to our duty or our interests.

Winston Churchill, 31 July 1914¹

So what, then, drew the British into involvement in the First World War? There are three significant reasons. First, the British were drawn into the war largely as a result of a

need to broaden its economic interests. Up to this time, they were leaders in the age of industrial capitalism. This blooming capitalism throughout the world now placed Great Britain in direct competition with the Germans who were also seeking to widen their global interests. Up to this point in time, the British enjoyed a position of great power due to their strong naval force with its inherent power projection capability. The British were now forced to branch out as the Germans also branched out into undeveloped countries and areas where they were not previously involved.

Another reason for the British entry into the war was events that were occurring within Great Britain. There were groups such as the labor movement, suffragettes, and those who either supported or opposed home rule over the Ulster population. The discontent of these groups manifested itself in acts that caused a large portion of the British population to have different thoughts concerning Britain's heretofore "isolationist" policies. What additional opportunities lay beyond the "island shores" of Great Britain? What would be the catalyst to cause the government to seek further possessions and expansion beyond its borders?

It seems that the third, and most significant reason for the British entry into World War I was the challenges to Great Britain from Germany in maintaining her status quo as a World

Power. British naval forces were threatened by Germany's massive shipbuilding efforts.² The British soon learned that there was a price to pay if they intended to maintain their status as a world power. Great Britain was drawn into an alliance with France and continental politics largely because of the German Kaiser's fleet-building efforts.³

Dominant in British strategy from 1914 to 1918 was the fact that she fought as a member of the Entente alliance, a coalition.⁴ Her alliance during the war was with two great powers, France and Russia, and six lesser ones, including Belgium, Serbia, Japan, Italy, Romania and Greece.⁵ It was not until April 1917 that the United States entered the war as an Associated Power on the side of the Entente.⁶ The Entente alliance existed on four levels: military, political, naval and economic. In 1914 although Britain was the strongest economic power within the Entente, it was France and Russia that possessed large and powerful armies.⁷ Britain dominated the Entente in the naval arena for the entire war by virtue of her possessing the largest navy.⁸ The British surmised that France and Russia would assume the brunt of fighting in the continental land war.⁹ One British contribution to the land fighting was the British Expeditionary Force of six infantry divisions and one cavalry division which was sent to northern France.¹⁰ Two other

significant British contributions to the war effort were the Royal Navy, which quickly blockaded Germany, and to a lesser extent, Austria-Hungary and Turkey, and the economic and financial assistance which she provided to her allies.¹¹

From the outset of hostilities, Germany sought a quick end to the war. Germany declared war against Serbia on 28 July 1914, against Russia on 1 August, against France on 3 August and Belgium on 4 August.¹² Germany's violation of Belgian neutrality was the immediate cause of Great Britain's entry into the conflict.¹³ In 1831 at a London conference, Belgium was recognized as an independent and permanently neutral state with its status guaranteed by the major European powers. The preservation of that neutrality had been a major factor in British foreign policy for over 80 years.

The quick victory the British also sought depended on the ability and the willingness of France and Russia to fight for two years without large-scale British military assistance.¹⁴ It was clear by December 1914 that this was not to be. Despite the French and Russian Armies' ability to thwart the Germans' plan to achieve a quick victory in a two-front war, their armies suffered great losses of men and equipment in doing so and by the end of 1914 the enemy occupied large areas of Allied territory.¹⁵ In November 1914 the Germans recognized that their only hope of winning would be to splinter Entente coalition and

they began a campaign to persuade either France or Russia to break with Britain.¹⁶ As a result, in 1915-1916 British strategy was modified towards them being seen to be doing whatever they could to give their allies material support and moral assistance, along with a sizeable manpower contribution on the Western Front.¹⁷

In 1914, in lieu of a quick decision, Germany was able to maintain the initiative and to dictate the course of the war by her territorial gains.¹⁸ By 1916 the Allies had the strength to destroy at least one of Germany's allies, but they did not have the initiative. The valuable attribute of initiative was lost as a result of the events of 1915.¹⁹

Throughout 1915, France played into German hands. The Germans had the initiative, and the French were forced to react to repeated invasions of their territory. The British Expeditionary Force, fighting alongside French forces, grew steadily as French demands upon it grew. It absorbed more and more of the men and materiel which, with much effort the country was making available. The irony of that period was that when Britain's expanding manpower was at last beginning to enable her to consider an alternative strategy, her equipment did not permit her to develop one.²⁰ There were vast shortages of munitions of all types, including machineguns, trench mortars, grenades, heavy guns, and rifles.

STALEMATE ON THE WESTERN FRONT

In the course of maneuvering for advantage against one another during the early winter of 1914, the Allied and German armies suddenly found themselves locked in a stalemate. After November 1914, both sides developed what they thought would be semi-permanent defensive systems, but succeeding weeks and months proved them wrong.²¹

Opposing high commands were made aware of the stalemate through casualty reports that showed drastic increases and corresponding minimal ground gains. Staff officers were instructed to examine recent battles to find answers to the problem. Their first reaction was a suggestion that changes in maneuver or attack formations or adjustments in artillery support would improve the chances for victory. But later in 1915 they came to the conclusion that there was not a reasonable solution.²²

Almost immediately trench warfare became an experience for combat soldiers which higher commanders and staff officers could not begin to comprehend. Naturally, for survival, the longer the soldiers remained entrenched in virtually static positions, the greater was their tendency to convert what had been temporary into something permanent. The genesis of a trench warfare society was the result.²³

This new society emerged because of three factors: passing time, elaborate trench defensive systems, and the inability of offensive systems to effect a breakthrough. A German Company commander described his first encounter with the stalemate by describing how the British had converted their line into a fortification marked by trenches and barbed wire. The Germans were left without an option and thus built parallel trenches because their successive attacks failed.²⁴ The result was a transition from mobile and conventional warfare to a static and unorthodox mode.

Throughout the years from 1915 to 1917 it was increasingly believed that the Western Front stalemate could only be broken by a concentration of overwhelming artillery firepower at the decisive point. While the Germans concentrated on the strategic defense in the West and tactical offense in the East in 1915, the British and French set out to prove this point. Initially, a shortage of munitions was a major problem, as both sides had only prepared for a contracted conflict. But production and availability of munitions improved later on in the war. The results, however, were quite dismal. While gains were measured in hundreds of yards, personnel losses were in the tens of thousands.²⁵

The year 1916 showed no improvement. The battles of Verdun and the Somme were quite costly for the French, British and

Germans. All told they suffered 1,700,000 casualties for minimal material gain. Unfortunately, it appeared that attrition, however unappealing, was the only answer to the problem. The longer the drudgery and dying went on the more likely it was that one side or the other would collapse through sheer exhaustion. Not one of the high commanders had envisioned this type of combat and thus no immediate solutions were forthcoming.²⁶

The tank was introduced as a major new weapon system at this time. All the major European powers had produced armed motor cars during the decade before 1914, but not specifically for use in war, consequently their numbers were small. When war actually broke out their value for reconnaissance and raids was soon realized. By necessity they quickly became armored but because of trench warfare, their mobility and subsequent use were severely restricted. But, as early as October 1914 the British explored the possibility of using some form of tracked vehicle to overcome the obstacles created by the newly constructed trenches.²⁷

THE TANK ON THE BATTLEFIELD

The British were also the first to actually introduce tanks onto the battlefield. They placed an initial order for 40 in

the autumn of 1915. Tactical doctrine for their employment was written in February 1916.²⁸ The test would be how well the tank would do if employed in terms of its own capabilities. The British used the two years since the tanks' debut wisely. For example, the Mark IV model, which first appeared in April 1917, was a marked improvement over its predecessors. Although like previous models, it was prone to breakdown, and had only a 4 miles-per-hour top speed; it possessed an improved motor, extended range of travel, and more effective firepower. The tank's stronger frontal armor provided a measure of protection from increasingly dangerous armor-piercing bullets.²⁹

Nonetheless, major tank production numbers in Britain now reached a level at which this weapon could achieve operational effectiveness. By late 1917, because of its enhanced quality and quantity, the tank was at last equipped to make a considerable impact on the battlefield. One year earlier, in October 1916, the British, under General Haig, had established a Tank Corps. Part of its job was to devise proper organization and employment for the new weapon. Hugh Elles, an early enthusiast for the tank, served as the chief of the Tank corps. His second-in-command was J.F.C. Fuller, a staff officer who demonstrated exemplary administrative efficiency and a keen intellect for military matters. Under Elles' and Fuller's leadership, the Tank Corps acquired a body of trained and highly

motivated personnel. As a result of some thorough and well thought out staff work, they were soon equipped with a set of tactics for the correct employment of their vehicles in battle.³⁰

THE BATTLE OF CAMBRAI

In mid-June of 1917, Fuller wrote a paper on the future employment of tanks, and in it he suggested that the country lying between Cambrai and St. Quentin was ideal for tank attacks. This was part of the front held by the Third Army, which was now under the command of General Sir Julian Byng. The area had seen little fighting. An advantage to the attacker was that the ground had not been churned up by artillery fire and it remained hard and firm. Also in British favor was the fact that the Germans lightly defended the area. The massive barriers of the Hindenburg Line made the Germans feel secure, and they used this sector partly as a rest camp for troops who had been fighting in Flanders. Fuller saw the opportunity for tanks to have their first real chance of fighting on suitable ground and being used for the purpose for which they were originally designed, that of crashing through the barbed wire and trench defenses in a surprise attack followed by the infantry.³¹

Cambrai, located on the Scheldt River, was an important target for attack. Before the war it had been a prosperous

industrial town. It derived its name from the townspeople who had a reputation for the weaving of fine fabrics -- giving rise to the term "cambric". The Germans had held the town since August 1914.

Cambrai was strategically important to the Germans because it was a major center of communications. Four main-line railroads converged here, as well as a number of very trafficable roads and several waterways. One rail line in particular served as a major line of communications for transport of men and supplies to the various sectors of the Front.³²

The front at Cambrai was held by the German Second Army, commanded by General Von der Marwitz. It constituted the left flank of the Army Group that was under the overall command of Field Marshall Crown Prince Rupprecht of Bavaria. The German Second Army contained two groups, each consisting of three to four infantry divisions. The Arras Group was located to the northwest. It was commanded by Lieutenant General von Moser, and consisted of the staff of the XIVth Reserve Corps and the 111th, 240th and 20th Infantry Divisions. The Caudry Group, commanded by General Baron von Watter, was further to the southeast. It contained the staff of the XIIIth Wurttemberg Army Corps and the 20th Landwehr, 9th Reserve, and 54th and 183rd

Infantry divisions. Some of these divisions were recently transferred from the Russian Front.³³

The British line paralleled the Hindenburg Main line, separated by a barren area of between three to five hundred yards which traced the forward slopes of a ridge from Havrincourt Wood to Villers-Guislan. It was held by IV Corps of Byng's Army, commanded by Lieutenant General Sir C. Woolcombe, to the northwest and III Corps, commanded by Lieutenant General Sir W. Pulteney to the southeast. The 36th Ulster Division of IV Corps and the 20th Light Division of III Corps were the actual divisions holding the line in October 1917. They both eventually played a key role in the battle (See Figure 1).³⁴

The Cambrai assault began precisely at 6:20 a.m. on 20 November 1917. A thousand guns delivered smoke, high explosive, and shrapnel upon the German positions, obscuring the battlefield and forcing the defenders to keep their heads down. Simultaneously the tanks were deployed. The total count of tanks was 476. Ninety-eight were assigned some very critical special duties such as bringing forward supplies, sending wireless reports from the battlefield, and breaching barbed wire obstacles with grappling hooks to facilitate the passage of the cavalry. The remaining 378 tanks were designated for the fight. None were held in reserve. They were tasked to breach barbed

wire, to destroy enemy forces by direct fire, to cross the German trenches as they went (See Figure 2).³⁵

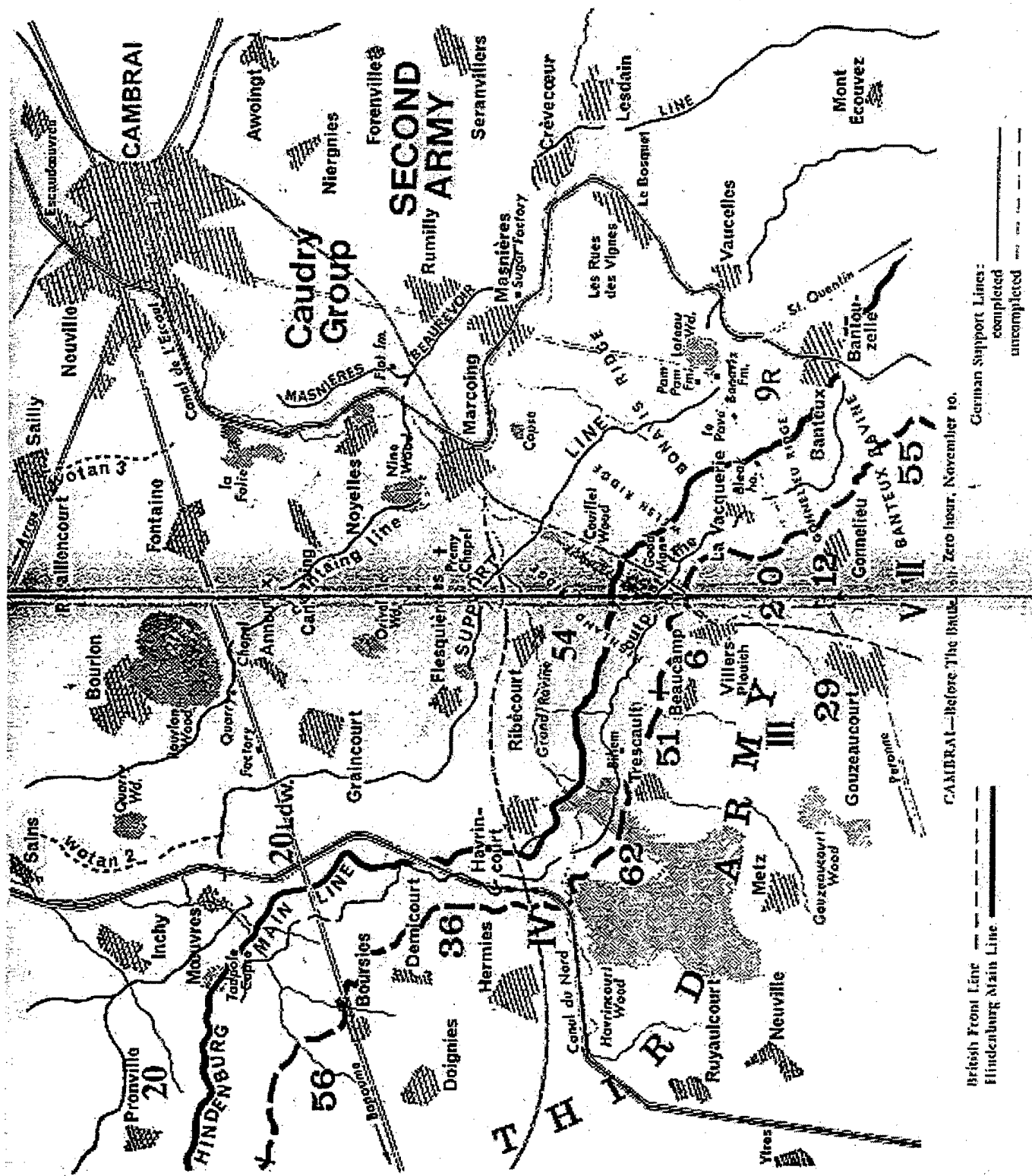


Figure 1 - Battle of Cambrai

The detailed allocation of tanks was as follows:

IV Corps

| <i>Tank Brigade</i> | <i>Tank Battalion</i> | <i>Division</i> | <i>Brigade</i> | <i>Number of tanks and mechanical reserve</i> |
|-------------------------|---------------------------|-----------------|----------------|---|
| 1st | D | 51st | 152nd | 42 |
| 1st | E | 51st | 153rd | 28 |
| 1st | E | 62nd | 186th | 14 |
| 1st | G | 62nd | 185th | 42 |

III Corps

| | | | | |
|-----|---|------|------|--------|
| 2nd | A | 20th | 60th | 24 (4) |
| 2nd | A | 29th | — | 12 (2) |
| 2nd | B | 6th | 16th | 36 (6) |
| 2nd | H | 6th | 71st | 36 (4) |
| 3rd | C | 12th | 35th | 24 (4) |
| 3rd | C | 12th | 37th | 12 (2) |
| 3rd | F | 12th | 36th | 36 (6) |
| 3rd | I | 20th | 61st | 30 (5) |
| 3rd | I | 20th | 62nd | 6 (1) |

Figure 2 - Tanks in the Battle of Cambrai

As the artillery preparation opened the tanks moved forward followed by six divisions of infantry. For ten days prior to the assault these divisions had trained with the tanks, thereby alleviating their skepticism towards the potential new arm of decision. By design, the infantry went forward in single file rather than abreast, which presented a much smaller target to the enemy.³⁶

Fourteen squadrons of the Royal Flying Corps (RFC) were also engaged in the fight for observation, bombing, and for the psychological effect on German ground forces. Further back, and with a two and one-half hour delayed departure time, were five divisions of cavalry. Byng believed that this was a potential decisive point to convert a penetration by the other arms into the unhinging of the German defenses over a considerable area.³⁷

In the opening stages the progress of the attack proved to be very successful. Followed by their columns of infantry, the tanks rolled right through the barbed wire. Then they reached and crossed the trenches that were supposedly too deep and broad to allow their transit. While their plunging fire pinned down enemy soldiers in the trenches, the British infantry moved in to sweep and clear the objectives.³⁸

The British assault on 20 November established the point that the Hindenburg system was not impregnable against a skillful, well-executed and coordinated attack. By 8 a.m.

British tanks and infantry had overrun a 6-mile stretch of the Hindenburg Main Line. By 11:30 a.m., the Hindenburg Support Line had been taken as well except for a small portion in the center zone. By early afternoon a four and one half-mile advance had been accomplished, and at least two German divisions had been rendered combat ineffective with many soldiers taken prisoner. British casualties, which were considerably less than the number of German casualties, amounted to about 4,000.³⁹

The heavy tank losses for the day - 179 altogether - resulted more from mechanical breakdown and ditching than from enemy action. A significant number of other tanks were in need of repair, with their crews in an understandable state of exhaustion. More importantly, the advance had neither earned the British any strategically important territory, nor accomplished a breakthrough. The cavalry did not commence operations until after midday and reached the new front line right at about dusk. Enemy machineguns met them. Byng's vision of a great cavalry penetration and exploitation did not materialize.⁴⁰

Little more was accomplished in the following week. Although the Germans abandoned Flesquieres during the night of 20-21 November, the advance towards Bourlon Ridge was difficult and costly. The window of opportunity that had opened for earlier success was now closed. The artillery lacked the

mobility, the ammunition supplies, and the registered targets to repeat the overwhelming shock effect of the first morning. And the early coordination between artillery, tanks, and infantry only got worse. The armored vehicles, limited in their range of vision, bypassed many enemy machineguns, which then wreaked havoc upon the follow-on infantry. This negated the advances that had been made, for tanks could not hold captured ground without infantry.⁴¹

On 27 November General Haig ceased operations. Most of Bourslon Wood had been taken, but the key high ground to the west and to the east had not. This was unacceptable, for it gave the British no clearly defensible line. Rather, they had secured a salient, which would have been impossible to hold without the possibility of forces in place of being cut off.⁴²

On 30 November 1917 the Germans seized the initiative and went on the offensive at Cambrai. Their objective was to entrap the British troops in their occupied salient. Although they did not achieve their objective, the enemy inflicted heavy losses and ruined British morale. The main German attack was aimed at the southern portion of the British advance. Byng had some indications of an impending German attack, but he concentrated his recent replacements and most of his guns in the disputed Bourslon area to the north. The result was an enemy attack upon battle-weary troops.

Soon after 7 a.m. on 30 November, and preceded by an intense one hour bombardment, the German assault began. The enemy employed infantry tactics previously unseen on the Western Front. Their main effort attacked in groups, infiltrating through parts of the front knocked out or weakened by the artillery preparation, by-passing strong points, and falling with great speed on the supporting artillery positions. By 10:30 a.m. the German forces had penetrated an 8-mile stretch of the British front in the southern sector. That placed the enemy well beyond what had been the original British line prior to the 20 November Cambrai offensive.⁴³

For a while it appeared as though the Germans would be able to move north and achieve their purpose of cutting off the base of the salient. But British reinforcements arrived in the form of dismounted cavalry, and they were able to fend off the exhausted German forces.⁴⁴

The Germans also attacked also in the northern sector, but with no comparable success. They did manage to capture the crest of the Bournon Wood, but not much else after that. By 3 December both sides were prepared to call a halt. However, the German counter-offensive had re-shaped the salient produced by the initial British advance and mandatory partial withdrawal was completed by 7 December. The fighting at Cambrai had come to an end.⁴⁵

For the British it was not nearly a satisfactory conclusion. They had retained only marginally more ground in the northern part of the sector than they had lost in the southern part. But for these meager "gains" they had engaged more than a quarter of their forces on the Western Front (20 divisions, five of them cavalry, and three brigades of tanks) and they had suffered 45,000 casualties, a comparable figure sustained by the enemy. And they had lost one-third of the tank personnel and two-thirds of the actual tanks.⁴⁶

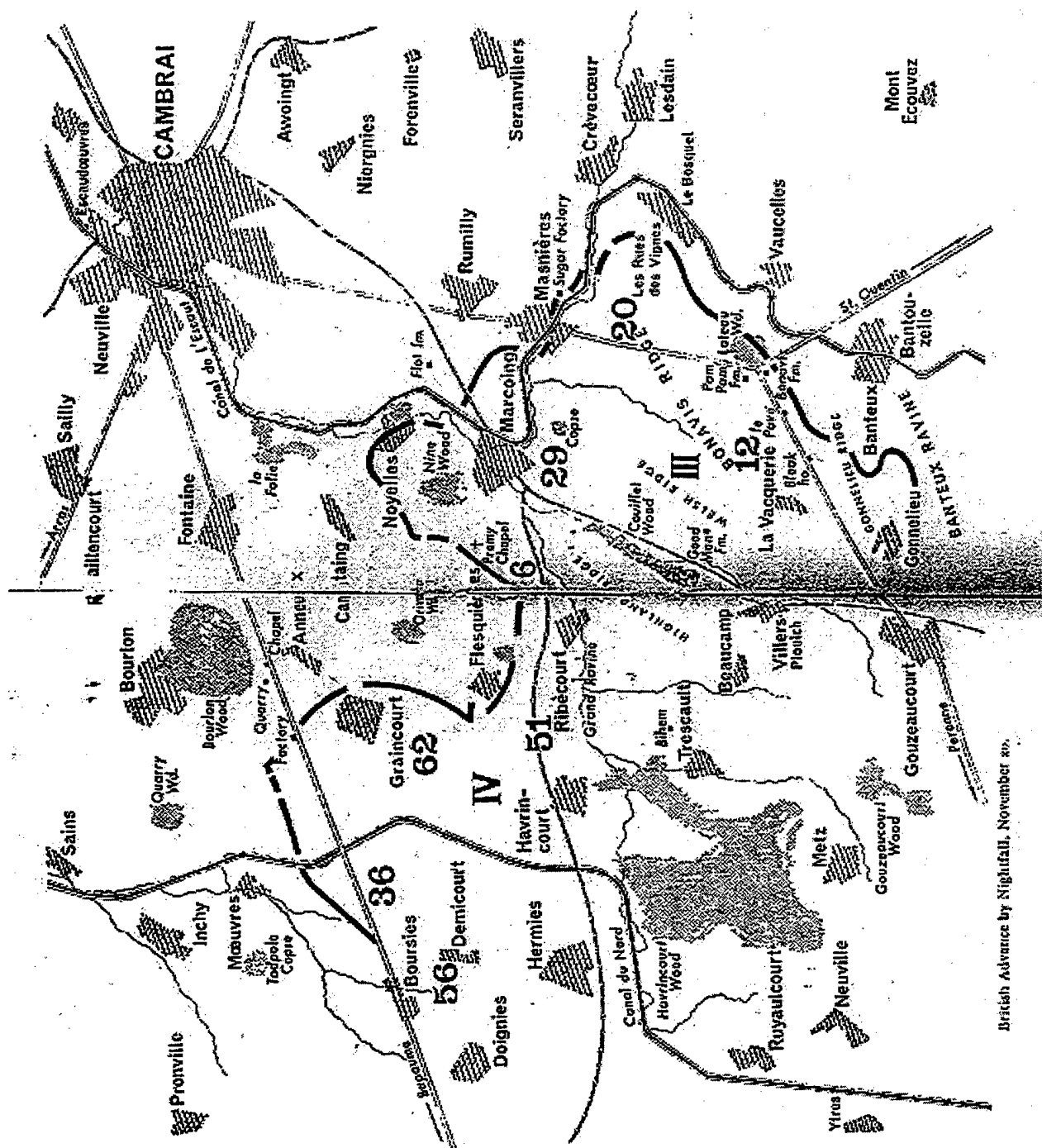
Just as important were the perceptions of the soldiers who had fought on the ground. One infantryman who, having been engaged in the early advance and then called back to help repel the Germans relates of the last phase:

When we...looked across towards the positions now held by the Germans, there was none that could not help thinking of the great and successful work of our troops during those four splendid days from the 20th November onwards, of the ground that had been captured from the enemy, of the comrades who gave their lives for that ground. And now that territory no longer belonged to us, but was once again in the hands of the foe.⁴⁷

For the British their short-lived success at Cambrai had been quickly followed by setback. For this battle, the start was marked by conditions that favored the attacker. Yet in other respects the opening actions appeared as the precursor of a new sort of offensive with the employment of a surprise

bombardment, the coordination of artillery, infantry, and tanks, and the use of armored vehicles en masse.⁴⁸

One thing, however, that is indisputable is neither the British on 20 November nor the Germans on 30 November had revealed any ability to turn early success into large-scale exploitation. After all was said and done, stalemate continued to dominate the Western Front as 1917 drew to an end (See Figure 3).⁴⁹



British Advance by Nightfall, November 20.

Figure 3 - The Aftermath of Cambrai, 20 November 1917

THE BATTLE OF AMIENS

1918 was to be the year of decision on the Western Front. Russia had dropped out of the war, signing a punitive peace treaty with Germany early in the year. This allowed the Germans to transfer 42 divisions from the Eastern Front, achieving a narrow numerical superiority and the opportunity to take the initiative in the west. On March 21, the German Army struck using an innovative approach tested previously in Russia and Italy. Following an intensive hurricane bombardment by gas and high explosive shells on command posts, key front line locations and artillery positions, infantry units moved forward and penetrated the British trenches. Strongpoints were bypassed and dealt with by follow-on forces. These methods were highly effective with gains measured in miles rather than yards. The Germans had solved the tactical equation, but were not prepared to fully exploit their accomplishments. Instead of reinforcing success, they conducted four other separate offenses during the period of April to July along 150 miles of the Western Front. The Allied line bent, but did not break and the huge amount of casualties, logistical difficulties and general exhaustion led to the German culminating point. The time had come for the Allies to take the initiative.

By dawn on 8 August 1918, the Allied main assault force was fully assembled within two or three miles of the enemy lines. The Australians had dug many trench lines to give the enemy an impression that they were focusing on the defense of Amiens. The infantry of four divisions occupied these positions, with priority going to those with the furthest objectives nearest the front line. Three Canadian divisions had marched forward under the cover of darkness and occupied trenches recently vacated by the French close behind the one Australian Brigade holding their line. A fourth Canadian division was further back, occupying defilade positions concealed from enemy observation. The tanks were positioned in wood lines or abandoned buildings two to three miles behind the front line. Tank movement was synchronized with raids by British bombers made an hour before daylight as a routine operation, and with the coming of daylight reconnaissance aircraft of the Royal Air Force (RAF) made their routine flights to verify sufficient camouflage on the troop positions, tanks, infantry and artillery pieces.⁵⁰

By agreement between Generals Rawlinson and Debeny, the Allied commanders, departure time was 4:20 a.m. for the British, forty-five minutes later for the French. Since the French would not be using tanks, they needed a short preliminary bombardment. The British relied solely on their 342 heavy Mark V and 72 Medium Mark A tanks. They was also equipped with a long Mark V

star model, which was capable of crossing wide trench obstacles carrying twenty to twenty-five men. An additional one hundred and twenty supply tanks completed Rawlinson's armor complement.⁵¹

The concentration of armor on the ground was matched by a concentration in the air. The Fourth Army front contained over 800 aircraft with 376 being fighters. One fighter squadron was assigned to work with the tanks. The French contribution was even greater for General Debeney had requested and received the support of the Air Division. The inclusion of this powerful unit of over 600 planes brought Debeney's total air strength to 1,104 and the Allied total to 1,904. The Germans could muster only 365 aircraft against the Allied effort.⁵²

Preparations were completed as the Canadians moved into the right of the British line, the Australians assembled in the center, the Cavalry Corps of three divisions fell in, the tanks stood at the ready, and 2,070 guns and howitzers were in place and ready to fire.⁵³

At 4:20 a.m. the British barrage commenced with great accuracy and effect, and the long lines of tanks and infantry advanced through limited visibility conditions. The actual effects could not be seen until the sun rose and burned off the early morning fog. All progressed smoothly except for forces in the III Corps zone. Across the front movement continued steadily. Support forces were able to pass through the front

line forces without much difficulty. By seven o'clock the Australians had seized their first objective and by half past ten they were on their second objective. By eleven o'clock the Canadians had secured their flank. As the situation became clearer, a remarkable sight was seen in the wide spaces of the center of the field:

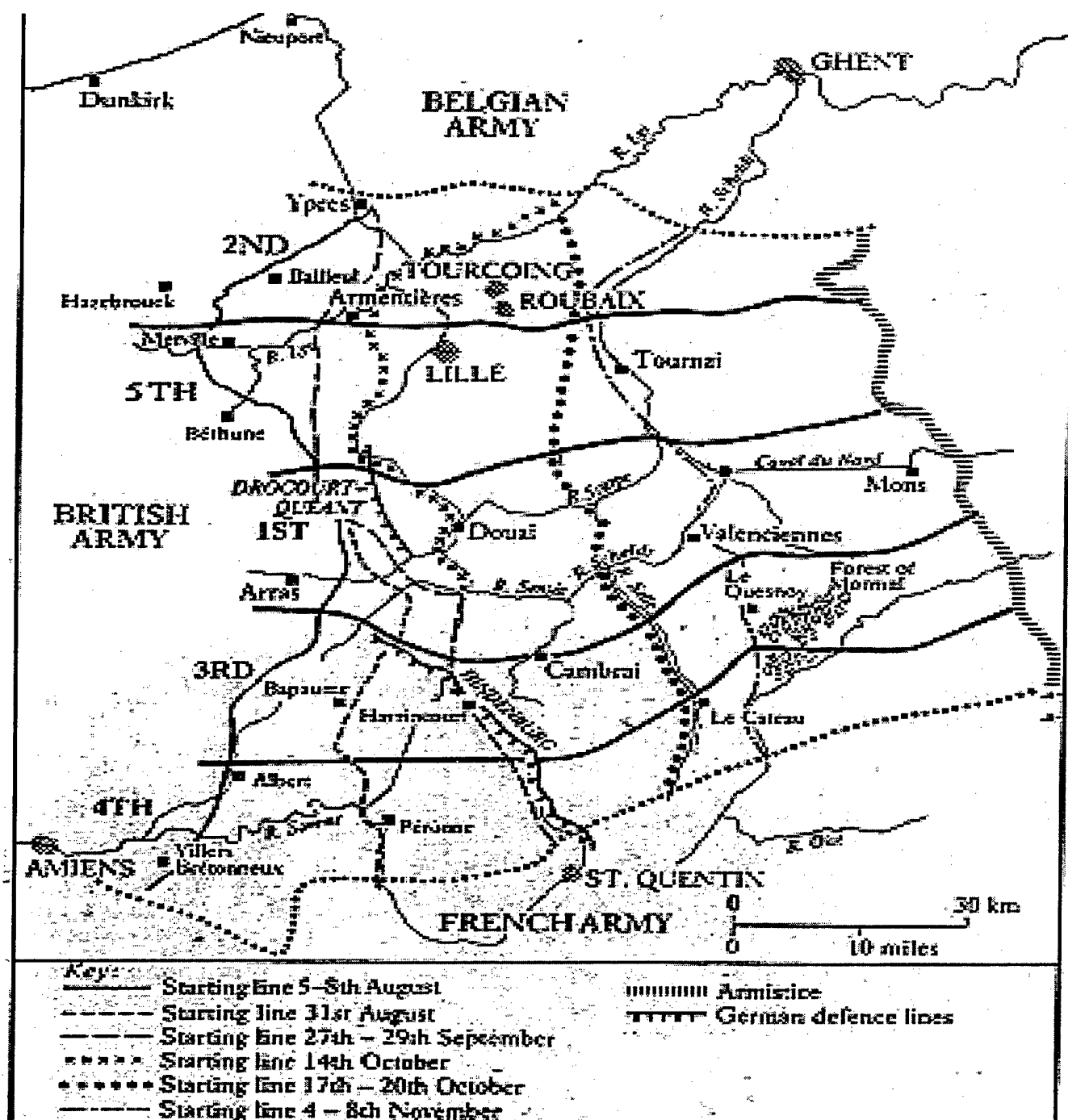
...The whole Santerre plateau seen from the air was dotted with parties of infantry, field artillery, and tanks moving forward. Staff officers were galloping about, many riding horses in battle for the first time...Indeed, at this stage there was more noise of movement than firing, as the heavy batteries...were no longer in action; for the infantry had gone so far that it was no longer possible for them to shoot.... No enemy guns seemed to be firing and no coordinated defense was apparent...⁵⁴ The fighting was over by 1:30 p.m.

The end of the first day's fighting saw seven German Divisions decimated, over 15,000 prisoners taken and 200 guns destroyed, an advance in the French sector which reached Beaufort, and a British line well up to Caix, Framerville, and Chipilly (See Figure 4).⁵⁵ In a matter of hours the enemy had been forced to retreat to a depth of 7 miles on an 11-mile front, losing valuable territory full of strategic promise. In addition to the heavy losses in manpower and guns the enemy sustained heavy losses in material. The British, on the other hand, suffered fewer than 9,000 casualties. The large number of German POWs indicated a collapse of morale. On 8 August Ludendorff termed this as "the black day of the German Army."

Churchill summed up the matter when, on 10 August, he wrote to a less than receptive Lloyd George: "it seems to me this is the greatest British victory that has been won in the whole war, and the worst defeat that the German Army has yet sustained".⁵⁶ It was on the 11th of August that the German Kaiser determined that the war must end.

The question for the German leaders after 8 August was not whether to end the war, but how to end it. From September through November they would vainly seek some "position of strength" from which to negotiate, only to be disappointed. In other words, in the end there would be no military solution to Germany's problems, either offensive or defensive, "and so the termination of the war would have to be brought about by diplomacy."⁵⁷ But the armistice that eventually came to be seemed a bittersweet "victory or sorts".

As observed by a British artillery officer, men would stop and read the bulletin without the least show of pleasure, troops were hanging about the streets or marching away very much as usual and I have yet to have my day of rejoicing in commemoration of the Armistice. I wonder why the most to be expected missed fire? Was it that men kept their feeling of thankfulness deep buried in their hearts, in the same way as they have hidden their fears and misgivings during four years of war, or was it that the occasion was too big for them to grasp? I'm sure I don't know.⁵⁸



Map 14 The British advance to victory, 8 August - 11 November 1918. Source: James E. Edmunds and R. Maxwell Hyslop, *Military Operations France and Belgium 1918*. History of the Great War, volume V (London: HMSO, 1947), frontispiece.

Figure 4 - The Battle of Amiens

LEADERSHIP

The events that led to British success on the Western Front at the Battle of Amiens came as a result of the exemplary leadership exhibited by one figure in particular -- Field Marshall Haig.

Haig provided the consistency of leadership throughout the campaign on the Western Front. Much was written about Haig after the war and, as to be expected, some had had only unkind words for the man who led the British Army through disappointing battles that occurred during the period from 1916 through the early part of 1918. But Haig's strength lay in the vision that he possessed concerning the British Army. Years before the war broke out Haig envisioned that it would be a protracted struggle, and that national resources would have to be mobilized to win it. The failure of successive governments to organize those resources throughout the duration of the war shows how great a visionary Haig actually was. When the British became involved in the war it became his responsibility to transform the citizens into soldiers. The outcome of the battles of 1918 shows that he succeeded in this task.⁵⁹

Haig's second important insight was, by 1915, a firm conviction that French forces would not be able to go on shouldering the main burden of fighting Germany in the West for

long, and that the British would have to take most of the burden off them.

Finally, in 1918 Haig became the architect of victory and the first leader to perceive its imminence. It was his perception that the War could be ended in that year that counts most. This was based on his belief that if the 1918 German spring offensive failed that Germany would be ruined. Just over a week after the commencement of the British counterattack at Amiens on August 8th a visiting Winston Churchill Haig told "...we ought to do our utmost to get a decision this autumn." On that belief he based all his future actions; his vindication came just under three months later, and with it the ending of the slaughter.⁶⁰

TECHNOLOGY

Technological adaptation was quite evident during the war as innovation after innovation occurred with blinding speed. Sometimes soldiers on the front line and sometimes scientific and technical personnel were responsible for bridging the gap between tactical theory and weapons employment.⁶¹

Sometimes tactics dictated the development of specialized weapons. Flame-throwers, trench mortars, air-cooled machineguns, automatic rifles, and grenades were developed to

meet the requirements of trench warfare. Conversely, development of poison gas, tanks, and aircraft forced the evolution of new and different tactics.⁶² A rifle battalion commander of 1914 would be hard-pressed to comprehend the nature of warfare four years later; a battalion commander of 1918 could retain situational awareness in World War II.

GAS WARFARE

From the middle of 1917 until the end of the war gas delivered by field artillery or mortars was common prior to an attack by any combatant. Use during night rather than daytime was preferable because the night air was more still. Gas was also most effective in heavily forested areas where the trees blocked the wind or in low-lying terrain like shell craters or trench systems.⁶³

The most lethal gas was phosgene, a highly toxic respiratory agent, according to American and German experiments. The British also used mustard gas and lewisite, otherwise classified as "Yellow Cross" gases. Each type of gas had certain weaknesses. For example, some would dissolve in water, some would quickly dissipate in air, and some were highly volatile and difficult to handle. Partly because of these technical difficulties and partly because artillery or mortar

shells were a key part of the delivery means the utility of using gas was quite limited. Although an effective casualty producer, poisonous gases proved to be an auxiliary to warfare rather than a key to victory. Nevertheless, all armies organized units to conduct gas warfare.⁶⁴

MECHANIZATION

Because of Winston Churchill's dissatisfaction with the War Office (and their lack of interest in developing a trench-crossing fighting vehicle), Navy influences became strikingly important in the development of the prototype Mark I heavy tank as it emerged in 1916. Tank designs were remarkably similar to land craft or similar amphibious vessels. William Foster of Lincoln, a firm that usually built agricultural implements and other heavy machinery, undertook their construction. Surprisingly, few or no automotive experts were involved in tank design. Taking advantage of lessons learned in combat in 1916 and 1917, the British also produced quality medium tanks in very small numbers in 1918.

Noting manpower shortages, some exponents of tanks, like J.F.C. Fuller, argued that these vehicles should be produced in large numbers because they were labor-saving devices. A single tank could prove to be worth more on the battlefield than a

large number of infantrymen. The saving of human labor by the use of machines would have as great an impact on the battlefield as on the civilian economy of the Industrial Revolution. Fuller argued in July 1918 for the abolition of cavalry divisions and their replacement by tank divisions. It was cheaper to use mechanization than horses and there was one other major advantage -- motorized vehicles could move an army much faster than horse-drawn vehicles and "success in war depends on mobility."⁶⁵

AIRCRAFT PRODUCTION

Aircraft proved to be increasingly important in the conduct of both offensive and defensive operations. Given continuous attention and financing by the high commands of all powers until the armistice, military aircraft production was not hampered by periodic work stoppages, as was the case with tanks. Even early in the war the relatively few scouting planes available quickly proved to be efficient and effective replacements for cavalry reconnaissance. Subsequent combat experience revealed great advantages of using aircraft in artillery spotting. Because of their versatility and obvious uses to counter trench warfare, aircraft were built in increasing numbers during the war.⁶⁶

In 1914, the RFC and the Royal Navy Air Service had a total of 272 aircraft, but a marked increase in orders and manufacturing occurred thereafter. In the British Isles in the first ten months of 1917, approximately 14,000 airplanes rolled off the assembly line; in 1918, through October, 25,685 aircraft were manufactured. The monthly production rate by the end of the war was 3500.⁶⁷

MANEUVER AND MOBILITY

When the war started everyone anticipated open warfare. By November 1914 the trench war stalemate marked the beginning of siegecraft. From Cambrai on to the end, open warfare of a new type emerged.⁶⁸

In the tactics of the first period, from previous limited experience, the belligerents hoped to utilize a traditional coordination of arms. Everyone believed the infantry would be supported by the field artillery in a coordinated advance, preceded by cavalry acting as scouts. This scheme was basically an adaptation of Napoleonic warfare with a Clausewitzian interpretation.⁶⁹

The resulting stalemate required fresh thoughts on how to eliminate the trap of positional warfare. At first, huge infantry assaults were thought to be the answer to penetrating

the enemy's defenses. Following this failed experiment, the doctrine writers of 1915 and 1916 thought the answer would be overwhelming artillery barrages. Out of the resulting impasse came the siegecraft concept that emphasized limited lock-step actions designed to conserve manpower while attriting the enemy. For three years, from 1915 to the end of 1917, siegecraft seemed to be the only viable scheme.⁷⁰

From the end of 1917 until the armistice in 1918 two schemes, both associated with open warfare came to be favored. The first was the tank-army model which, quite naturally, stressed mechanization. The second, and much preferred, was a new coordination-of-arms model in which the now obsolete cavalry was omitted and tanks and aircraft were directed to support the infantry in the attack.⁷¹

The latter scheme was the sole development of 1918 and both the Germans and the Allies contributed to it. An overall theme had to be developed using the diverse types of troops and materiel available. The whole had ultimately to be orchestrated under a single commander. The patrolling aircraft, tanks, forward infantry, field artillery, and other supporting forces were given parts to play in the military composition of a set-piece battle.⁷² Rather than firing a massive preparatory bombardment, the artillery employed the previously developed tactic of a creeping barrage slightly ahead of the advance of

the tanks and forward infantry units. Aircraft were used to locate and identify enemy artillery, and their information facilitated counter-battery fires to coincide with the infantry-tank attack. Also used in low fly-overs of the advancing units, other aircraft strafed enemy strong points and spotted nearby enemy positions for ground commanders. Commanders and their staffs realized six critical points by 1918: that they had to gain air superiority, that they had to use the element of surprise in their attacks, that they had to use a number of troops with special qualifications, that they had to have as many tanks as possible on trafficable terrain, that field artillery had to be ready to displace quickly, and, importantly, that logistical support had to be responsive and sustained.⁷³ By November 1918 the Allies had done a creditable job of addressing most of the points. The German offensives of March to July foundered on the basis of not mastering the last three. Twenty years later they were ready to put the lessons of 1918 to use.

CONCLUSION

The battles of Cambrai and Amiens were important chapters in British history. On the battlefield at Cambrai the British were the first to introduce the tank as a force multiplier. Although the tank was successfully integrated with field

artillery, infantry, and some cavalry, it was done so on a small scale. The gains that were made during the first days of fighting were soon lost because of British failures to exploit penetrations of enemy defenses.

The time period between the Battle of Cambrai in November 1917 and the Battle of Amiens in August 1918 was one of additional battlefield failures, continued trench warfare, and more importantly, a time for the British leadership to reflect on past experiences to determine what had to change in order to break the Western Front stalemate.

The winning combination turned out to be improvements in how the leadership envisioned the endstate of the war and the means to achieve the endstate. General Haig provided the leadership which enabled others within the government and the military to develop the weapons systems and corresponding doctrine which ultimately led to British and Allied success in World War I.

WORD COUNT = 6873

ENDNOTES

¹ Trevor Wilson, The Myriad Faces Of War: Britain and the Great War, 1914-1918 (Cambridge: Polity Press, 1986), 7.

² John Terraine, The Western Front 1914-1918 (New York: J.B. Lippincott Company, 1965), 23.

³ Ibid.

⁴ John Turner, ed., Britain and The First World War (London: Unwin Hyman, 1988), 24.

⁵ Ibid, 24-25.

⁶ Ibid, 25.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid.

¹² Terraine, 39.

¹³ Ibid, 42.

¹⁴ Turner, 25.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid, 26.

¹⁸ Terraine, 55.

¹⁹ Ibid.

²⁰ Ibid, 56.

²¹ Hubert C. Johnson, Breakthrough! Tactics, Technology, and the Search for Victory on the Western front in World War I Novato: Presidio Press, 1994), 57.

²² Ibid, 59.

²³ Ibid, 66.

²⁴ Ibid, 67.

²⁵ Charles Messenger, The Blitzkrieg Story (New York: Charles Scribner's Sons, 1976), 11.

²⁶ Ibid.

²⁷ Ibid, 13.

²⁸ Ibid, 14.

²⁹ Wilson, 487.

³⁰ Ibid, 487.

³¹ Bryan Cooper, The Battle of Cambrai (New York: Stein and Day, 1967), 64.

³² Ibid, 69.

³³ Ibid, 71.

³⁴ Ibid.

³⁵ Wilson, 489.

³⁶ Wilson, 489-490.

³⁷ Ibid, 490.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Ibid, 490-491.

⁴² Ibid, 491.

⁴³ Ibid.

⁴⁴ Ibid.

⁴⁵ Ibid, 492.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Ibid, 165.

⁵¹ John Terraine, To Win A War: 1918, The Year of Victory (New York: Doubleday and Company, 1981), 90.

⁵² Ibid.

⁵³ Ibid, 90-91.

⁵⁴ Ibid, 91.

⁵⁵ Arthur C. Doyle, The British Campaign in France and Flanders: July to November 1918 (London; Hodder and Stoughton Limited, 1945), 33-34.

⁵⁶ Wilson, 591.

⁵⁷ Terraine, To Win A War, 102-103.

⁵⁸ Ibid, 233.

⁵⁹ Ibid, 186.

⁶⁰ Ibid, 188.

⁶¹ Johnson, 113.

⁶² Ibid.

⁶³ Ibid, 125.

⁶⁴ Ibid, 126.

⁶⁵ Ibid, 136-137.

⁶⁶ Ibid, 132.

⁶⁷ Ibid.

⁶⁸ Johnson, 282.

⁶⁹ Ibid.

⁷⁰ Ibid.

⁷¹ Ibid, 283.

⁷² Ibid, 286.

⁷³ Ibid, 287.

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